

*Hydromanicus*, *Antarctopsyche*, *Symphitopsyche* and *Stenopsyche*. This latter genus has been placed in the Philopotamidæ since it has ocelli, but is more allied to *Hydropsyche* by all other characters.

The *Psychomyini* will include, besides the usual genera, *Ecnomus*; it was also placed here by MacLachlan. *Tinodes* is removed to the next tribe.

The *Polycentropini*, besides the usual genera, includes *Tinodes*; this move is also warranted by the structure of the male genitalia.

The *Philopotamini* has the usual genera, as placed by Dr. Ulmer, but without *Stenopsyche*.

(To be continued.)

## REPORT ON A COLLECTION OF JAPANESE CRANE-FLIES (*TIPULIDÆ*, *DIPTERA*).

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

(Continued from p. 164.)

Genus: **Tipula** Linnaeus.

*Key to the Japanese Tipulæ.*

1. Large species (over 30 mm. in length).....2  
    Smaller species (less than 25 mm. in length).....4
2. Wings ochre-brown, the cross-veins darker, the stigma bright yellow [abdomen ochraceous-brown, the sternum paler].....*præpotens* Wied. (1)  
    Wings not ochre-brown with a yellow stigma.....3
3. Abdominal tergites with the apices brown; hypopygium pale dull fulvous brown, thoracic dorsum blackish with two rusty lines .....*mikado* Westw. (2)  
    Abdomen with three dorsal longitudinal stripes, the median one indistinct on the basal segments.....*coquilletti* End.
4. Wings hyaline or subhyaline, with the costal region darker..5  
    Wings either subhyaline without a dark costal border, or else variegated hyaline, gray and brown.....6
5. Thoracic notum yellowish; abdomen without a distinct stripe on either side.....*yamata*, sp. n.

1 *Præpotens* Wiedemann; Ausercur. Zweifl. Ins., vol. 1, pp. 49, 41 (1828).

2 *Mikado* Westwood; Trans. Ent. Soc. Lond., for 1876, p. 594.

- Thoracic præscutum and scutum dark; abdomen yellow, with a broad brown stripe on either side of the yellow median vitta.....*aino*, sp. n.
6. Abdomen with the segments having a dark caudal margin...7  
Abdomen lined with dark stripes.....8
7. Caudal margin of the abdominal segments very narrow; wings light yellow without darker markings, except the prominent stigma.....*insulicola*, sp. n.  
Caudal margin of the abdominal segments broad, comprising at least two-thirds of the length of the sclerite; wings light gray with hyaline blotches.....*nipponensis*, sp. n.
8. Head yellowish.....9  
Head black or dark brown.....10
9. Abdomen with a median stripe; flagellum of antennæ black.....*japonica* Loew<sup>(1)</sup>  
Abdomen with three stripes, one median and two lateral: two basal flagellar segments yellow, remainder brown at base, yellow at tip.....*serricauda*, sp. n.
10. Large species (length, ♂, 15 mm.; wing, 19 mm.).....*yusou*, sp. n.  
Small species (length, ♂, 10 mm.; wing, 13-5 mm.).....*parva* Loew<sup>(2)</sup>

### ***Tipula coquilletti* Enderlein.**

1898 *Tipula nubifera* Coquillett; Proc. U.S. Nat. Mus., vol. 21, p. 305.

1902 *Tipula nubifera* Kertess; Cat. Dipt., vol. 2, p. 299.

1912 *Tipula coquilletti* Enderlein; Zoöl. Jahrb., vol. 32, pl. 1, p. 7.

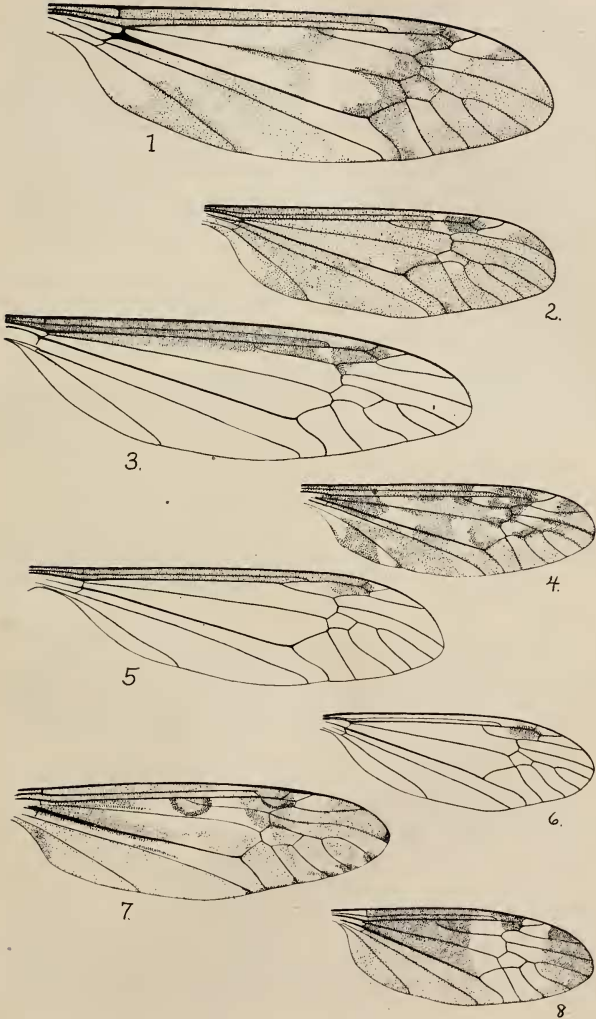
A male and female; the following additions to Coquillett's description may be of value:

The legs in my specimens have the femora and tibiæ almost uniformly dark brown; abdomen very long for a *Tipula*. The wing is shown in plate 16, figure 7. Male hypopygium: 8th tergite rather broad, its caudal margin almost straight; 8th sternite (see plate <sup>(3)</sup> figure 17), much produced caudad into a scoop-like lobe which is very deeply notched medially, the tips of the lobes directed

1 *Japonica* Loew; Wiener Ent. Monatschr., Vol. 2, p. 101, 102 (1858).

2 *Parva* Loew; Wiener Ent. Monatschr., vol. 2, p. 102 (1858).

3 Plate 17 will appear in the next issue.



JAPANESE CRANE-FLIES.

inward; 9th tergite rather small (see plate 17, figure 8), viewed from above, the caudal margin is narrowed and evenly concave, the whole caudal end being covered densely with small black spicules; suture between the sternum and tergum not clear; 9th sternite (plate 16, figure 7), broad, its caudal margin concave. Pleural appendage, a large flattened lobe (see plate 17, figure 10), on the inside (plate 17, figure 9), with the dorsal outer angle densely provided with short black spicules, with numerous other spicules down the inner face.

Female (allotypic): tergal valves of the ovipositor long and slender, heavily chitinized, not so deep as the high sternal valves.

Vial 13; Tokyo, Japan; April 25, 1912; 1♂, 1♀.

### ***Tipula yamata*, sp. n.**

Head blackish; thoracic notum yellowish; anterior half of the pleura dark brown; abdomen without distinct longitudinal stripes; wings with a pale brown suffusion, the costal region a little darker.

Male, length 12 mm.; wing 16.6 mm.

Female, length 19.2 mm.; wing 16.8 mm.

Male.—Palpi dull yellow; frontal prolongation of the head rather short, dull yellow; antennæ light yellow, the flagellar segments passing into brown; front, vertex and occiput dark brown passing into yellow on the genæ.

Pronotum brown. Mesonotum light coloured, yellowish, with indistinct, narrow, darker stripes on the præscutum. Pleura, propleura and anterior half of the mesopleura and the metapleura, pale, whitish. Halteres long, slender, pale. Legs: fore and middle coxæ dark brown; trochanters and femora yellow, light brown at tip; tibiæ yellowish, brown darker at the tip; tarsi brown. Wings with a pale brown suffusion; costal border darker brown, this colour including cells C and Sc.; stigma greyish brown. Venation, see plate 16, figure 5.

Abdominal tergites 1-4 yellowish, 5-9 darkened, brownish; sternites 1-6 yellow, 7 yellow with a brown median line, 8 brown basally, yellow at the tip. Male hypopygium: 9th tergite from above with a prominent median chitinized protuberance, its caudal margin gently concave and with short bristles and chitinized points. Pleural suture incomplete; pleural appendages as follows: outermost (see plate 17, figure 3), a broad, flattened lobe quite

densely covered with long hairs, these hairs rather stout except along the caudal margin where they are delicate, fringe-like; just inside this appendage is a cylindrical, chitinized arm directed toward the end of the 9th tergite, the apex evenly rounded; the largest of the pleural appendages is a flattened arm whose apex is notched and crenulated and fits into the notch of the 9th tergite; the penis is very long and slender, the central vesicle large and rounded.

Female.—About as in the ♂, the flagellar segments subannulate, the apical three-fifths of each segment being much paler than the basal portion; abdominal tergites 5-7 with a dark brown basal mark, segments 8 to the end brown; valves of the ovipositor short and sharply pointed. In one ♀, the entire tergum beyond segments 1-3 is almost entirely dark brown but this may be caused by the gravid condition of the abdomen which is greatly distended with eggs.

Holotype, ♂, Tokyo, Japan; August, 1912 (Vial 42).

Allotype, ♀, Tokyo, Japan; August, 1912 (Vial K).

Paratypes, 2 ♀, Tokyo, Japan; May 7, 1912 (Vial 34).

The specific name is that of an aboriginal Japanese race inhabiting the southern and central portions of the southern half of Nippon, facing the Pacific Ocean.

### ***Tipula aino*, sp. n.**

Head blackish; præscutum and scutum dark coloured; abdomen yellow with two dorsal brown lines, one on either side of the broad ground stripe; wings with a slight gray tinge, costal region brown.

Male.—Length 16 mm.; wing 16.5-18.4 mm.

Female.—Length 19.4 mm.; wing 20.5 mm.

Male.—Palpi and the frontal prolongation of the head brown; antennæ with the three basal segments orange, segments 4 and 5 orange at the extreme base, entire remainder of the antennæ black; front, vertex and occiput dark coloured, blackish.

Mesonotum with the præscutum and most of the scutum uniformly dark brown with narrow darker stripes, one median and one on either side; scutum pale medially, lobes very dark; scutellum and postnotum dull yellow, the latter a little brown on the sides and in some specimens entirely dark. Pleura dull yellow

with a brown tinge on the propleura and anterior portions of the mesopleura. Halteres rather long, pale. Legs: coxæ and trochanters light yellow; femora orange-yellow the tip brown; tibiæ yellowish on the basal half, thence passing into brown; tarsi brown. Wings with a dark brown costal border, this including cells C, Sc., and the cephalic halves of cells R and 1st R<sub>1</sub>; stigma even darker; most of cells R and M and the bases of cells R<sub>2</sub>, R<sub>3</sub> and R<sub>5</sub> hyaline; remainder of the wings with a brownish-gray tinge. Venation as in plate 16, figure 3.

Abdominal tergites yellow with a broad brown stripe on each side, these stripes becoming confluent on segments 7 and 8; caudal margin of segments 3-6 narrowly brown; sternites dull yellow, the caudal margins of the segments a little darker. Male hypopygium: 9th tergite from above (see plate 16, figure 4), with the latero-caudal angles produced into strong spines between which is a small rounded lobe covered with hairs; suture between the tergum and sternum not clear; appendages of the pleural region viewed from the side (see plate 17, figure 5), two in number, the more ectad of which is a large, oval lobe, somewhat chitinized on its edges, its ventro-cephalic margin on the inside with a small oval knob provided with hairs; inner lobe very large, its caudal edge thickened and here provided at its tip with a comb of bristles directed caudad and an apical bunch directed dorsad; inner face of this appendage near its tip with a group of about 14 sharp points.

Female.—Ovipositor with the sternal valves very high, blade-like, the tips subacute; tergal valves very slender apically, the tip scarcely enlarged.

Holotype, ♂, Tokyo, Japan; April 13, 1912 (Vial 12).

Allotype, ♀, Tokyo, Japan; April 13, 1912 (Vial 12).

Paratypes, 5 ♂, 5 ♀; as follows:

Vial J; 1 ♀, Tokyo, Japan; August, 1912 (Cornell).

Vial 12; 2 ♂, 2 ♀, Tokyo, Japan; April 13, 1912 (Cornell).

Vial 40; 3 ♂, 2 ♀, Tokyo, Japan, August, 1912 (U.S. Nat. Mus.).

The specific name is that of an aboriginal Japanese race formerly occupying the northern half of Nippon, now confined to Yesso and the islands to the northward.

***Tipula insulicola*, sp. n.**

Antennæ annulated black and yellow; thorax without indistinct brown stripes; wings light yellow with a prominent oval brown stigma; abdominal segments with a dark caudal margin.

Female.—Length 11.2 mm.; wing 11.3 mm.

Female.—Palpi and frontal prolongation of the head brown, the latter short and stout; antennæ with the three basal segments yellow, remaining segments with the basal two-fifths dark brown, the apices light yellow, these colours abruptly contrasted; front, vertex and occiput brown.

Præscutum dull yellow with three indistinct brown stripes of which the median one is broad, the lateral ones shorter and narrower; scutum with the lobes reddish; scutellum and postnotum dull yellow. Pleura dull yellow. Halteres dull yellow. Legs: coxæ, trochanters and femora light yellow; tibiæ brownish yellow, a little darkened at the tip; tarsi brown. Wings light yellow, cells C and Sc. a little brighter; stigma prominent, oval; an indistinct hyaline stripe across the wing beginning before the stigma and including cell 1st M<sub>2</sub>. Venation, see plate 16, figure 6.

Abdominal tergites dull yellow, each segment narrowly but distinctly margined with dark brown all around, sternites very pale, almost white, each segment with the caudal margin narrowly brown; genital segment reddish yellow. Ovipositor with the tergal valves having a stout, enlarged base, the valves produced caudad into exceedingly slender points which are slightly expanded at their tips; tergal valves much shorter than the elongate, bladelike sternal valves which are directed caudad.

Holotype, ♀, Tokyo, Japan; August, 1912 (Vial K).

(To be continued.)

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**TWO NEW CALIFORNIA THAMNOTETTIX  
(HOMOPTERA).**

BY E. D. BALL, LOGAN, UT.

While collecting in California, several years ago, a single specimen of a beautiful *Thamnotettix* was captured, but escaped from the net; not, however before its characters were pretty defi-